

Roatan 13 - More building and fixing

G Joseph Wilhelm

Are you familiar with the electronic dog training collars? We have two. They principally emit varying levels of a tone or vibration using a controller. They do have the shock option that we have only had to use in an emergency on a low setting to recall the dog from imminent danger. I noticed that Legend would not respond to the vibrate or tone. Either the controller or collar battery was dead or the vibrate function ceased. My wife inspected the collar, tested the tone and held the collar to her neck and pronounced the vibrate function was working fine. She handed it to me for verification, I held it to my neck and at the same instant she pressed the vibrate button, the last word I heard her say was "Oopsie!". Yes indeedy! She had the setting on eight and pressed the shock button. It took a week for the burnt hair smell and howling to recede and I am now pretty sure what it would have been like standing underneath the detonation of Oppenheimer's first test. At this point, my view was looking up from the floor and I was concerned for my wife. She was on her knees looking down over me, in tears and gasping for air from laughing so hard. The bad part is, this was the *second* time I had fallen for this and the howling I recall was from her uncontrollable cachinnation. She reassured me everything would be OK, the button only got stuck on for a little bit and then resumed her boffo display of amusement.

And so begins another month in Roatan. Now to the lab news: This just in...



The first lab cabinet shell has been completed and will be temporarily test fit. The doors are cut down to open without interfering with the upper shelf face board. The space left when the doors are closed will be filled with a pull-out and tilt-down drawer(s).



Interior shelves to be sized for the existing lab glassware



In place with doors open. All the labware to the right of the lower chest will reside in the cabinet.



In place with doors closed. Some slight door alignment remains. I don't believe my design conflicts with the lower chest design. This is to the left of what will be the glass fronted apothecary display. A duplicate cabinet will be made for the right side of the apothecary. The glass front cabinets will be a different approach incorporating arches.

The difficult part of this is locating all of the kit to be housed in the cabinets and shelves and locating/refurbishing the tools necessary to accomplish the ideas and designs that pop forth from my imagination. Slow and frustrating. I decided it was time to do something microscopical for a change.

I have a Brunel SP-29 field scope I have never used and there are plenty of critters etc. to observe and photograph just outside my door. It took a full day to find it.



I had made a field carry case for it from an antique electric meter case. With the original Styrofoam packing, it fit perfect.

Upon inspection, with the years of storage, the focusing mechanism grease had hardened and seized. I had no manual for the scope but, I promised Helen and all the other nice folks at Brunel a shout of thanks in this article if they sent me one, which they did and I have fulfilled the promise.

Now I am not entirely sure what I actually have. The scope is close but does not match exactly the picture Brunel has on their website as shown below



Brunel SP-29 website illustration.

My scope does however, match exactly the Swift FM-31 “clone” as depicted in this Micscape article from some years ago.

[http://www.microscopy-uk.org.uk/mag/artmar11/A Comparison of FM-31 and clone.pdf](http://www.microscopy-uk.org.uk/mag/artmar11/A%20Comparison%20of%20FM-31%20and%20clone.pdf)

The picture below is from that article



Left: Original Swift FM-31 with vertical screw focusing Right: “Clone” identical to mine
According to the article “The clone has the newer focusing system similar to the later FM-31s.”

The review of the "Clone" seemed complimentary and favored it as an economical alternative to the FM-31. I sallied forth into repair mode. The manual was no help for this.



Disassembly was straight forward. The entire focusing block removed with two screws. Top spring retaining plate easily removed. Turn the block over and remove two incredibly small set screws to slide the focusing screw cone and barrel (the seized parts) from the block.

The focusing mechanism is fairly simple. A brass shaft, finely threaded on the left half with a brass cone machined in the center with the apex pointing to the right unthreaded half. Rotating this threaded shaft in the barrel horizontally moves the cone left or right, raising or lowering the stop screw for the stage. Disassembly, cleaning and relubrication went well.



This is where I no longer concur with the Chinese engineering here, which is usually good for this sort of instrument. The focusing knobs are held on by a large flat slotted screw.

Removing these reveals a tiny threaded screw shaft. I mean really.....really tiny. The large slotted head was a bit like driving a tack with a sledge hammer, engineering wise.

Reassembly did not, how should we say.....live up to expectations. Remember those really.....really tiny screw shafts? They break with a loud sneeze, inside the brass shaft. Worthless!

So, I needed a knob the same size that would fit over the brass shaft. I went to my parts drawer labeled "things that look like the focusing knobs on a Brunel SP-29 "Clone"
Yup! There they are. Five of 'em lower right.



I'll have to drill out the center hole to size and I can do that when the drill press gets finished, so that finishes me for this month and being microscopical. We are working beyond the "Gotta fix sumthin' before I can fix sumthin' frustration without copious amounts of alcohol so far.

Final story for the Americans out there:

My wife was in line in the grocery store and noticed a slight woman 35-40 yrs old. Her eyes drew Bri's attention as they appeared completely black and were just more than slits beneath her eyelids. This woman gazed directly back at Bri and said:

"Hello".

Bri replied with the same salutation and the woman asked:

"Are you American?"

When Bri answered in the affirmative, she began her story:

"I went to America" she said proudly. "All the way to Baltimore, I was sick"

She then lowered her head and traced a scar with her finger. It ran across her scalp nearly from ear to ear. Then she said:

"I was sent to Johns Hopkins Hospital because I had a big cancer tumor. A nice Doctor named Ben Carson took it out for free! It took him a long time, about 17 hours but he got it all."

A grin spread across her face as she triumphantly pronounced:

"And now I can see! And I can take a taxi and shop all by myself!"

She closed the conversation with a simple "America is great. Thank you"

I couldn't agree more.

Cheers!

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Previous essays can be found in the [Library](#).

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